COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

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STATEMENT OF LEGAL AND FACTUAL BASIS

Omega Protein, Inc.
610 Menhaden Road
Reedville, VA
Permit No. PRO-40278

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Omega Protein, Inc. has applied for a renewal Title V Operating Permit for its Reedville, Virginia facility. The Department has reviewed the application and has prepared a draft renewal Title V Operating Permit.

Engineer/Permit Contact: Sherry L. Tostenson Date: 9/30/13
Sherry L. Tostenson
(804) 527-5097

Air Permit Manager: James E. Kyle, P.E. Date: 9/30/2013

Deputy Regional Director: Kyle Ivar Winter, P.E. Date: 9/30/13

FACILITY INFORMATION

Permittee
Omega Protein, Inc.
P.O. Box 175
Reedville, VA 22539

Facility
Omega Protein, Inc.
610 Menhaden Road
Reedville, VA 22539

County-Plant Identification Number: 51-133-0011

Source Description:
NAICS Code: 311712 – Seafood Product Preparation and Packaging
Primary SIC Code Number – 2077 Animal and Marine Fats and Oils

Menhaden fish are conveyed from holding bins to indirect steam-heated cookers which break down the fat cells and coagulates the protein of the fish. The cooked fish pulp goes through a series of hydraulic screw presses where the oil-water emulsion (press liquor) is separated from the cooked fish. The residual solids (fish scrap) are conveyed to indirect steam dryers and then airless dryers. The dried fish solids are cooled and conveyed to a hammer mill for grinding then treated and cured and sold as fish meal. The press liquor passes through centrifugal decanters to remove suspended fines. The press liquor is heated and pumped to a bank of centrifugal separators which separate oil from the water (stickwater). The oil is then fed through a series of polisher centrifuges where the remaining fines and moisture are removed. This oil goes through a refining process where it is bleached, hydrogenised, and deodorized, then stored in ground storage tanks prior to sale. The stickwater is fed to a series of evaporators where the solids are concentrated to 50%. These condensed fish solubles are either fed back onto the fish scrap prior to steam drying or prepared for sale as solubles.

The facility is a Title V major source of sulfur dioxide and is currently limited to a total of 259.3 tons per year by two Minor New Source Review (NSR) Permits. This source is located in an attainment area for all pollutants and is a PSD size source. The Reedville facility was issued an initial Title V Operating Permit on January 30, 2007 and is currently permitted under a Minor NSR Permit issued on May 30, 2013 and a minor NSR permit issued on July 16, 2004.

The Title V renewal application was received on June 16, 2011. The application was deemed to be timely and complete on July 12, 2011; therefore, the application shield was effective upon this date.

COMPLIANCE STATUS

A full compliance evaluation with a site visit was last conducted on August 23, 2013. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, have been evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The significant emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
BW1 BW2	2 3	Babcock and Wilcox boilers fired on distillate oils, No. 6 oil, non-condensable process gases	Heat input 112 MM BTU/hr ea., steam output 125,000 lb/hr @ 250 psig, 400°F;	-----	-----	-----	May 30, 2013
CB3	4	Cleaver Brooks CB-100-500-250ST No. 2 oil-fired boiler	20.9 MM Btu/hr	------	-----	-----	July 16, 2004
NUK (CB4)	5	GTS Energy NUK 800 propane -fired boiler	4.7 MM Btu/hr	-----	-----	-----	July 16, 2004
D1 D2	8 9	Dupps Airless Dryers fired on distillate oil, No. 6 oil, with heat exchanger, waste heat recovery unit, and high efficiency cyclones inherent to process	Heat input 29.7 MM BTU/hr ea., 108,388 lb (≈162,500 fish) dried/hr ea.	Babcock and Wilcox boilers	BW1 BW2	PM, VOC	May 30, 2013

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Process Equipment							
S1 S2	2/3	TST 150 Steam Dryers	15,000 lb/hr steam loading ea.; 91,712.5 lb, (≈137,500 fish) dried/hr ea.	Babcock and Wilcox boilers	BW1 BW2	PM, VOC	May 30, 2013
S3	2/3	TST 200 Steam Dryer	20,000 lb/hr steam loading; 114,390.5 lb (≈171,500 fish) dried/hr	Babcock and Wilcox boilers	BW1 BW2	PM, VOC	May 30, 2013
MC2	10	Fish Meal Cooler	233,450 lb (≈350,000 fish) processed/hr	High efficiency cyclone	-----	PM/PM-10	May 30, 2013
CT1	-----	Cooling Tower, non-contact evaporative type	8,450 gal water/ min	-----	-----	-----	May 30, 2013

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

EMISSIONS INVENTORY

The 2012 annual emissions (as reported in CEDS) are summarized in the following table:

2012 Facility Wide Criteria Pollutant Emissions in tons/year						
PM	PM_{10}	$PM_{2.5}$	CO	NO_x	SO_2	VOC
4.7	4.6	2.1	7.8	34.6	58.6	0.6

2012 Facility Hazardous Air Pollutant Emissions

Pollutant	Hazardous Air Pollutant Emissions in tons/yr
Formaldehyde	0.08

EMISSION UNIT APPLICABLE REQUIREMENTS –
Fuel Burning Equipment (BW1, BW2, CB3, NUK (CB4), D1, D2)

The permit conditions are taken from the following: a minor NSR permit dated May 30, 2013, a minor NSR permit dated July 16, 2004; and 9 VAC 5-80-50 et. seq., Part II-Article 1 Federal Operating Permits for Stationary Sources. The applicable requirements in the NSR Permits are taken from the following Federal and State regulations.

40 CFR Part 60 NSPS Subparts D and Da do not apply to any of Omega Protein's fuel burning equipment because they all have heat input ratings below 250 MMBtu/hr each and are not electric utility steam generating units. Subpart Db does not apply to BW1 and BW2 because they were constructed before 1984 and have not been modified to increase heat input capacity or emissions rate. The other units are all rated below 100 MMBtu/hr each. The SO_2 standard in Subpart Dc, Standards of Performance for Commercial-Industrial Boilers applies to D1, D2, and CB3 but not the PM standard. Boiler NUK (CB4) is rated below 10 MMBtu/hr. Steam dryers S1 – S3 are not fuel burning equipment.

Omega Protein's fuel oil-fired industrial boilers were constructed before June 4, 2010 and are rated at greater than 10 MMBtu/hr each. Therefore, BW1, BW2, D1, D2, and CB3 are classified as existing affected sources under 40 CFR Part 63 Subpart JJJJJJ- National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources and must comply with work practice standards and management practices described in the Table 2 of the MACT. Virginia has not currently accepted delegation to enforce this rule, so there are no applicable requirements in the NSR Permits. Boiler NUK (CB4) is not subject because it burns only propane and is rated below 10 MMBtu/hr.

9 VAC 5 Chapter 50-Part II-Article 1 New and Modified Stationary Sources Standards of Performance for Visible Emissions and Fugitive Dust/Emissions (Rule 5-1) and Process Heaters applies to all fuel burning equipment at Omega Protein and limits their opacity to 20% except for the dryers which are subject to NSPS Dc (9 VAC 5-50-410).

9 VAC 5 Chapter 40-Part II-Article 8 Existing Stationary Sources Emission Standards for Fuel Burning Equipment (Rule 4-8) applies to BW1 and BW2; the PM standard applies to CB3, D1 and D2 but the SO_2 standard does not. The boiler NUK (CB4) is exempt from Rule 4-8 due to its size.

The airless dryers D1 and D2 are both fuel burning and processing equipment; limits relating to fuel combustion can be found under the "Fuel Burning Equipment Requirements" and limits relating to processing can be found under the "Process Equipment Requirements" of the Title V Permit. Process emissions from the steam dryers S1-S3 are non-condensable gases that are combusted in boilers BW1 and BW2 therefore are combined into the boilers' emissions limits under "Fuel Burning Equipment Requirements" of the Title V Permit.

Emissions Unit Identification

The emission unit table lists the four boilers and two fish dryers that are fuel burning equipment; from Condition 1 of the May 30, 2013 NSR Permit and Condition 2 of the July 16, 2004 NSR Permit. A boiler listed as unit CB2 in the July 16, 2004 NSR Permit no longer exists and is omitted from this Title V permit.

Limitations

Condition 1 prohibits the dryers' (S1-S3, D1, D2) non-condensable process gases from bypassing the two boilers (BW1, BW2) that are used as control devices or being vented to the atmosphere; from Condition 2 of the May 30, 2013 NSR Permit.

Conditions 2 and 3 specify the maximum capacities of the airless dryers' (D1, D2) fuel and combustion air delivery devices so each dryer's heat input rating is limited below 30.0 MMBtu/hr; from Conditions 3 and 4 of the May 30, 2013 NSR permit and 40 CFR §60.83(a)(2).

Condition 4 establishes the minimum temperature in the boilers' combustion chambers required to achieve the minimum destruction efficiency for controlling VOC emissions from dryers' (S1-S3, D1, D2) non-condensable process gases when the process is operating at or greater than 80% capacity; from Condition 7 of the May 30, 2013 NSR Permit.

Condition 5 establishes minimum temperature in the boilers' flame zones required to achieve the minimum destruction efficiency for controlling VOC emissions from dryers' (S1-S3, D1, D2) non-condensable process gases; from Condition 8 of the May 30, 2013 NSR Permit.

Condition 6 limits the fuel used in boilers BW1 and BW2 to four types: No. 6 fuel oil and distillate oil with no more than 2% sulfur content; biofuels including fish oil processed on site and renewable diesel; and process gases from the dryers (S1-S3, D1, D2). It also limits the fuel used in airless dryers D1 and D2 to No. 6 or distillate oil with no more than 0.5% sulfur content along with LPG in the form of propane. Specifications and restrictions for each type of allowable fuel are also provided; from Condition 16 of the May 30, 2013 NSR Permit.

Condition 7 limits the fuel used in boiler CB3 to distillate oil with 0.3% sulfur content; from Condition 5 of the July 16, 2004 NSR Permit.

Condition 8 limits the throughput of fuel combusted in boilers BW1 and BW2 so that no combination of allowable fuels will cause the sulfur dioxide emissions annual limit in Condition 12 to be exceeded; from Condition 18 of the May 30, 2013 NSR Permit.

Condition 9 limits the combined throughput of fuel combusted in airless dyers D1 and D2 to 990,000 gallons/year; from Condition 19 of the May 30, 2013 NSR Permit.

Condition 10 limits the throughput of fuel combusted in boiler CB3 to 480,000 gallons/year; from Condition 3 of the July 16, 2004 NSR Permit.

Condition 11 limits the throughput of fuel combusted in boiler NUK (CB4) to 100,000 gallons/year; from Condition 4 of the July 16, 2004 NSR Permit.

Condition 12 limits the criteria pollutant emissions from boilers BW1 and BW2, including combusted non-condensable process gases from the dryers (S1-S3, D1, D2); from Condition 22 of the May 30, 2013 NSR Permit.

Condition13 limits the criteria pollutant emissions from airless dryers D1 and D2; from Condition 23 of the May 30, 2013 NSR Permit.

Condition 14 limits the criteria pollutant emissions from boiler CB3; from Condition 6 of the July 16, 2004 NSR Permit.

Condition 15 limits the criteria pollutant NO_2 emissions from boiler NUK (CB4); from Condition 7 of the July 16, 2004 NSR Permit.

Condition 16 limits visible emissions from boilers BW1 and BW2 to 20% opacity; from Condition 26 of the May 30; 2013 NSR Permit.

Condition 17 limits visible emissions from airless dryers D1 and D2 to 20% opacity while residual oil is being combusted; from Condition 27 of the May 30, 2013 NSR Permit.

Condition 18 limits visible emissions from airless dryers D1 and D2 to 10% opacity while distillate oil is being combusted; from Condition 28 of the May 30, 2013 NSR Permit.

Condition 19 limits visible emissions from boiler CB3 to 20% opacity; from 9 VAC 5-50-80 (Standard for visible emissions) of State Regulations.

Condition 20 incorporates by reference NSPS Subpart Dc as it applies to the airless dryers D1 and D2, from Condition 30 of the May 30, 2013 NSR Permit; and as it applies to boiler CB3, from 9 VAC 5-50-410 of State Regulations.

Periodic Monitoring, Recordkeeping, and Reporting

The EPA periodic monitoring guidance, dated September 18, 1998, indicates on page 4 that periodic monitoring is required for each emission point at a source, subject to Title V of the Act, which is subject to an applicable requirement.

Condition 22 requires a temperature monitoring device in each of the two boilers, BW1 and BW2, which are used as control devices for the dryers' process streams. Temperature measurements shall be continuously recorded and reduced to 3-hour averages in order to demonstrate compliance with the NCG process stream destruction efficiency requirement in Condition 5; from Condition 11 of the May 30, 2013 NSR Permit.

Condition 23 requires a flow monitoring device at the entry point of each of the two boilers, BW1 and BW2, which are used as control devices for the dryer's process streams. Flow measurements shall be continuously recorded at least once per hour in order to demonstrate compliance with the NCG process stream control requirements in Condition 3; from Condition 12 of the May 30, 2013 NSR Permit.

Condition 24 requires continually monitoring and recording fuel flow to each of the airless dryers, D1 and D2, in order to demonstrate compliance with the heat input rating limitation in Conditions 2 & 3; from Condition 13 of the May 30, 2013 NSR Permit.

Condition 25 describes how the opacity requirements for the fuel burning equipment will be monitored by having an opacity observation schedule, along with associated recordkeeping and reporting provisions that have been developed. The monitoring schedule in Condition 25 for the boilers is modeled after schedules developed for similar Title V facility operations in Virginia. Additional opacity monitoring and reporting requirements for the NSPS Dc applicable boilers are in the Testing section.

Condition 26 requires fuel certification records to demonstrate compliance with fuel throughput and specification requirements for boilers BW1, BW2, and airless dryers D1, D2; from Condition 17 of the May 30, 2013 NSR Permit.

Condition 27 requires fuel certification records to demonstrate compliance with fuel throughput and specification requirements for boiler CB3; from Condition 5 of the permit dated July 16, 2004.

Condition 28 requires records for fuel burning equipment be kept, including combustion chamber temperatures in boilers BW1 and BW2 that fall outside of control parameters in Condition 4, and temperatures reduced to 3-hour averages, process stream flow readings from the fish dryers to the boilers, fuel usage to the airless dryers, fuel supplier certifications, fuel throughput on a monthly and annual basis, boiler malfunctions, scheduled maintenance operating procedures, operator training records, stack test results, and visible emissions evaluations; from Condition 32 of the May 30, 2013 NSR Permit.

Condition 29 requires records for fuel throughput in boilers CB3 and NUK (CB4) as well as fuel supplier certifications; from Condition 10 of the July 16, 2004 NSR Permit.

Condition 31 requires semi-annual fuel quality reports for all fuel oil-burning equipment (BW1, BW2, D1, and D2) and condition 30 requires quarterly fuel quality reports for fuel oil-burning equipment (CB3); from Condition 33 of the May 30, 2013 NSR Permit and Condition 11 of the July 16, 2004 NSR Permit (respectively).

Compliance Assurance Monitoring (CAM)

Generally, the requirements of 40 CFR 64, CAM, apply to each emissions unit meeting all three of the following criteria on a pollutant-by-pollutant basis:

- The unit emits or has the potential to emit (in the absence of add-on control devices) quantities of one or more regulated air pollutants that exceed major source thresholds,
- The unit is subject to one or more emission limitations for the regulated air pollutants for which it is major before control, and
- The unit uses a control device to achieve compliance with one or more of these emission limitations.

Neither boilers CB3, NUK (CB4), airless dryers D1, nor D2 has the potential to emit more than 100 tons/year of any criteria pollutant (resulting from fuel combustion) if uncontrolled. Each unit's potential to emit is limited by its heat input capacity and inherent design features, e.g. the airless dryers' fuel pumps and fans. Boilers BW1 and BW2 have the potential to emit over 100 tons/year of NO_x and SO_2. However, these units have fuel throughput and sulfur content limits, rather than add-on pollution control devices. The fuel burning equipment combustion emissions are not subject to CAM. However, boilers BW1 and BW2 were further evaluated to determine applicability to CAM due to being considered an add on control device for the NCGs (VOCs). It was determined from a recent stack test the potential to emit (PTE) for VOCs were significantly below major source thresholds therefore not applicable.

Testing

The permit does not require specific source tests for the boilers or the dryers. However, applicable requirements from condition 8 of 7/16/04 permit and condition 31 of 5/30/13 permit to use appropriate test method(s) for the permitted facility in accordance with procedures approved by the Department has been included in the permit under facility wide if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to

determine compliance with an emission limit or standard. Initial performance tests for demonstrating control efficiency with the boilers BW1 and BW2 as well as for the Dupps Airless Dryers D1 and D2, were conducted in July 2011. Testing requirements were subsequently removed from the NSR Permit.

Condition 57 requires providing testing and monitoring ports and appropriate test methods, if and when source testing is required; from Condition 31 of the May 30, 2013 NSR Permit and Condition 8 of the July 16, 2004 NSR permit.

Streamlined Requirements

The following conditions in the NSR permits have not been included for the reasons provided. The streamlined emission limits in 9 VAC 5 Chapter 40-Part II-Article 8 Existing Stationary Sources Emission Standards for Fuel Burning Equipment (Rule 4-8) cited in the current Title V Permit were less stringent than those that remain in force. Conditions 35 through 42 of the May 30, 2013 NSR Permit and Conditions 12 through 19 of the July 16, 2004 NSR Permit have not been listed because they are the same as the requirements in the General Conditions section of the Title V Permit. Condition 2 of the July 16, 2004 NSR Permit listed boiler CB2, which no longer exists. CB2 had no applicable requirements in the NSR permit. Condition 9 of the July 16, 2004 report required the construction and startup dates of boiler CB3.

EMISSION UNIT APPLICABLE REQUIREMENTS –
Processing Equipment (S1, S2, S3, D1, D2, MC2)

The permit conditions are taken from the following: a minor NSR permit dated May 30, 2013; and 9 VAC 5-80-50 et seq., Part II-Article 1 Federal Operating Permits for Stationary Sources. Five process emissions units, steam dryers S1, S2, and S3, and airless dryers D1 and D2 emit non-condensable gases (NCGs) that are ducted to boilers BW1 and BW2 for control. The NCGs are introduced to the flame zones of the boilers and any bypass or uncontrolled release is prohibited. These process stream gases function as additional boiler fuel and as a result NCG combustion products are emitted from the boilers' stacks. Consequently, the dryers' process emissions are combined into those of the boilers, i.e., there are no separate emission limits for the controlled process streams of the steam dryers alone. Being also fuel burning equipment, airless dryers D1 and D2 do have separate limits for combustion emissions in the Fuel Burning Equipment Requirements Section of the Title V Permit. In the absence of an applicable NSPS for the dryers' process stream, control standards in Subparts NNN and RRR were initially used as models when determining BACT in the NSR Permit for controlling PM and VOC contained in the NCGs from the five dryers. Subsequent performance testing in 2010 and 2011 indicated that concentrations of PM and VOC in the uncontrolled NCG stream were measurable but so small when subsumed in the much larger mass of the boilers' fuel oil combustion gases, that 98% destruction on a mass basis was problematic to demonstrate. As a result of the performance tests, NSR Permit requirements for controlling NCGs and monitoring control efficiency were revised.

Emissions Unit Identification

The emission units table lists the steam dryers and fish meal cooler that are process equipment; from Condition 1 of the May 30, 2013 NSR Permit.

Limitations

Condition 38 limits fish throughput for the airless dryers D1 and D2 and steam dryers S1-S3, combined, to 316,825 tons per year, calculated monthly as the sum of each consecutive 12-month period; from Condition 20 of the May 30, 2013 NSR Permit.

The fish meal cooler MC2 is downstream and serves all the dryers, so it does not have a throughput limit. Condition 36 requires PM emissions from the meal cooler MC2 to be controlled by a high efficiency cyclone rated at 98% control efficiency and that it be annually inspected for structural integrity; from Condition 10 of the May 30, 2013 NSR Permit.

Condition 41 limits PM/PM-10 emissions from the meal cooler MC2; from Condition 24 of the May 30, 2013 NSR Permit.

Condition 40 limits visible emission from the meal cooler MC2 to 10 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A); from Condition 29 of the May 30, 2013 NSR Permit.

Periodic Monitoring, Recordkeeping, and Reporting

The EPA periodic monitoring guidance, dated September 18, 1998, indicates on page 4 that periodic monitoring is required for each emission point at a source, subject to Title V of the Act, which is subject to an applicable requirement. With respect to these requirements, periodic monitoring is required for PM and PM-10 emissions from the Process.

A requirement for monitoring flow of the steam dryers' and airless dryers' process emissions into the boilers' flame zones is in Condition 23 of the fuel burning equipment requirements section of the Title V permit. Their process emissions act as additional fuel for BW1 and BW2 boilers, therefore are included with the boilers' emissions. The periodic monitoring for the steam dryers' process addresses the applicable throughput limits and consists of the maximum rated hourly capacity for the process, good operating practices, and continuous PLC records. Recordkeeping requirements also serve as periodic monitoring requirements. Since the fish meal cooler is downstream and serves all the dryers, it does not have a throughput limit that needs monitoring. Emissions from the fish meal cooler are monitored according to CAM. It was also viewed that if the MC2's high efficiency cyclone was being operated properly and within the range for CAM it is assumed the visible emission emissions limit would be met. This is based on performance of a stack test on the MC2 along with performing a visible emissions evaluation.

Condition 53 requires records for process equipment be kept, including inspection results for the fish meal cooler MC2, continuous differential pressure measurements for the MC2 cyclone, annual fish throughput in tons for all the dryers (D1, D2, S1-3), records of fish catch off-loaded per boat, scheduled maintenance operating procedures, operator training records, stack test results, and visible emissions evaluations; from Condition 32 of the May 30, 2013 NSR Permit.

Condition 54 specifies CAM recordkeeping requirements; from 9 VAC 5-80-110 of State Regulations and 40 CFR 64.9(b).

Compliance Assurance Monitoring (CAM)

The steam dryers S1-S3 do not have the potential to emit more than 100 tons per year of PM, PM-10, or VOC with or without control devices, thus are not subject to CAM. The fish meal cooler MC2 does have the potential to emit over 100 tons/year of PM/PM-10, is subject to emissions limits not to exceed 25.4 tons PM/PM-10 per year, and uses a high efficiency cyclone to achieve compliance with the limit, thus is subject to CAM.

Condition 45 is specific to CAM and by being equivalent in requiring continuous differential pressure measuring and recording, is substituted for Condition 15 of the May 30, 2013 NSR Permit.

Conditions 47 through 51 are all CAM applicable requirements; from 40 CFR 64.7.

Testing

The permit does not require further source tests for the process equipment. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. Requirements to provide testing and monitoring ports and use appropriate test method(s) in accordance with procedures approved by the Department have been included in the permit Conditions 57 and 58 if and when testing is required. These requirements are not in the NSR permit but are from 9 VAC 5-50-30 and 9 VAC 5-80-110 of State Regulations. Initial performance tests for Fish Meal Cooler MC2 were conducted in July 2011. Testing requirements were subsequently removed from the NSR Permit.

Streamlined Requirements

No streamlined requirements have been identified for the steam dryers or fish meal cooler.

EMISSION UNIT APPLICABLE REQUIREMENTS – Cooling Tower (CT1)

Emissions Unit Identification

The table of emission units lists the cooling tower; from Condition 1 of the May 30, 2013 NSR Permit.

Limitations

Condition 37 establishes limiting make-up water throughput as the method of controlling PM emissions from the cooling tower CT1 and prohibits the use of chromium-based water treatment chemicals (which would subject it to MACT Q); from Condition 5 of the May 30, 2013 NSR Permit and 40 CFR §63.401.

Condition 39 limits make-up water throughput for the cooling tower CT1 to 2,220.7 x 10^6 gallons per year; from Condition 21 of the May 30, 2013 NSR Permit.

Condition 42 limits PM/PM-10 emissions from the cooling tower CT1; from Condition 25 of the May 30, 2013 NSR Permit.

Condition 40 limits visual emissions from the cooling tower to 20% opacity except for one six minute period in any one hour of not more than 30 percent opacity; from 9 VAC 5-50-80 (Rule 5-1) of State Regulations.

Monitoring/Recordkeeping

The EPA periodic monitoring guidance, dated September 18, 1998, indicates on page 4 that periodic monitoring is required for each emission point at a source, subject to Title V of the Act that is subject to an applicable requirement.

Conditions 44 and 53 describe periodic monitoring for the cooling tower. Periodic monitoring has been determined to consist of maintaining MSDS for water treatment chemicals, maintaining water flow records, demonstrating compliance with good operating practices, adhering to a maintenance schedule, all of which are described in State Regulations.

Compliance Assurance Monitoring (CAM)

The cooling tower CT1 does not have the potential to emit more than 100 tons per year of any criteria pollutant with or without control devices, thus is not subject to CAM.

Testing

No testing is required specifically for the cooling tower CT1. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. However there are requirements* to provide testing and monitoring ports and use appropriate test method(s) for the permitted facility in accordance with procedures approved by the Department have been included in the permit under Condition 58 if and when testing is required.

*: From Condition 31 of May 30, 2013 NSR permit and Condition 8 of July 16, 2004 NSR permit.

Reporting

No Initial Notification, Initial Compliance Notification, or Compliance Status Reports are required for this unit.

Streamlined Requirements

No streamlined requirements have been identified for the cooling tower CT1.

FACILITY WIDE CONDITIONS

No facility wide conditions exist in either of the underlying NSR permits for the Omega Protein facility. Also, the facility does not have a State Operating Permit that would have facility wide limits. The opacity limits in both of the current NSR permits are equal to or more stringent than the new and modified source rule from Chapter 50 of Virginia's regulations (Rule 5-1).

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §§2.1-20.01:2 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 3-2006".

This general condition cites the Articles that follow:

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V

facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

In order for emission units to be relieved from the requirement to make a written report in 14 days the emission units must have continuous monitors meeting the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.

This general condition cites the sections that follow, as applicable to the facility:

9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources

9 VAC 5-40-50. Notification, Records and Reporting

9 VAC 5-50-50. Notification, Records and Reporting

This general condition contains a citation from the Code of Federal Regulations as follows:

40 CFR 60.13 (h). Monitoring Requirements.

J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits.

9 VAC 5-80-260. Enforcement.

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on General Condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

9 VAC 5-80-110. Permit Content

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:

40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.

40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.

40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:

9 VAC 5-60-70. Designated Emissions Standards

9 VAC 5-80-110. Permit Content

STATE-ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have not been included in the Federal Operating Permit:

9 VAC 5-40-340, Standard for odor;

9 VAC 5-60-200, Emission Standards for Toxic Pollutants from Existing Sources (Rule 6-4) et. seq.; and,

9 VAC 5-60-300, Emission Standards for Toxic Pollutants from New and Modified Sources (Rule 6-5), et. seq. Rule 6-5 is applicable to formaldehyde emissions from boilers BW1 and BW2.

FUTURE APPLICABLE REQUIREMENTS

The fuel burning equipment BW1, BW2, D1, D2, are CB3 are subject to 40 CFR Part 63, *National Emission Standards for Area Sources: Industrial, Commercial, and Institutional Boilers* (MACT Subpart JJJJJJ) because the facility is an area source with existing boilers and industrial process heaters. The source has submitted an initial notification for these units. Once the compliance date is reached, the facility will be required to submit an initial notification of compliance status and biennial notifications of compliance status, which certify compliance with the work practice and management practice standards in the MACT.

INAPPLICABLE REQUIREMENTS

None of the fuel burning emissions units, steam dryers, or cooling tower are subject to 40 CFR Part 64, Compliance Assurance Monitoring because each one does not meet all three criteria, as described above. The facility as a whole is not subject to 40 CFR Parts 51, 52, 70, and 71, Title V Greenhouse Gas Tailoring Rule, Phase 1 because the facility has not triggered major NSR

review (the only current potential source of GHG Title V applicable requirements) since January 2, 2011. MACT Q does not apply to the cooling tower because the NSR Permit prohibits the source from using chromium-containing water treatment chemicals.

40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units is not applicable to NUK (CB4) because the boiler's heat input rate is less than the 10 MMBTU/hr applicability level. Regarding insignificant emissions units, the fuel storage tanks are not subject to 40 CFR 60, Subpart Kb, Volatile Organic Liquid Storage Vessels Standards and 9 VAC 5-40-5220 VOC Standards for Petroleum Liquid Storage and Transfer Operations (Rule 4-37) because the residual and diesel fuels' maximum true vapor pressure is below those standards' applicability levels and the gasoline tanks' dimensions are below the standards' applicability levels.

COMPLIANCE PLAN

Omega Protein was determined to be in compliance with all applicable requirements in its current permits during its most recent Full Compliance Evaluation and is not currently subject to any State Consent Order.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
TK46	No.2 oil tank 308,000 gal (1972)	9 VAC 5-80-720B	VOC	N/A
TK75	No.2 oil tank 152,000 gal (1976)	9 VAC 5-80-720B	VOC	N/A
TKFT1	No.2 oil tank 20,000 gal (2003)	9 VAC 5-80-720B	VOC	N/A
TK70	No. 6 oil tank 508,000 gal (1971)	9 VAC 5-80-720B	VOC	N/A

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
TK71	No. 6 oil tank 508,000 gal (1972)	9 VAC 5-80-720B	VOC	N/A
TK21	No.6 oil tank 302,000 gal (2009)	9 VAC 5-80-720B	VOC	N/A
TK38	Used motor oil tank 15,600 gal (1985)	9 VAC 5-80-720B	VOC	N/A
TK77	Hydraulic oil tank 8,000 gal (1970)	9 VAC 5-80-720B	VOC	N/A
TK14	Lubricating oil tank 7,600 gal (1975)	9 VAC 5-80-720B	VOC	N/A
TK1	Fish oil tank 15,000 gal	9 VAC 5-80-720B	VOC	N/A
TK2	Fish oil tank 24,000 gal	9 VAC 5-80-720B	VOC	N/A
TK3	Fish oil tank 24,000 gal	9 VAC 5-80-720B	VOC	N/A
TK4	Fish oil tank 20,000 gal	9 VAC 5-80-720B	VOC	N/A
TK5	Fish oil tank 132,000 gal	9 VAC 5-80-720B	VOC	N/A
TK6	Fish oil tank 59,000 gal	9 VAC 5-80-720B	VOC	N/A
TK7	Fish oil tank 508,000 gal	9 VAC 5-80-720B	VOC	N/A
TK8	Fish oil tank 308,000 gal	9 VAC 5-80-720B	VOC	N/A
TK9	Fish oil tank 294,000 gal	9 VAC 5-80-720B	VOC	N/A

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
TK10	Fish oil tank 93,000 gal	9 VAC 5-80-720B	VOC	N/A
TK11	Fish oil tank 8,300 gal	9 VAC 5-80-720B	VOC	N/A
TK24	Fish oil tank 308,000 gal	9 VAC 5-80-720B	VOC	N/A
TK27	Fish oil tank 508,000 gal	9 VAC 5-80-720B	VOC	N/A
TK47	Fish oil tank 308,000 gal	9 VAC 5-80-720B	VOC	N/A
TK77	Fish oil tank 508,000 gal	9 VAC 5-80-720B	VOC	N/A
TKF11	Fish oil tank 18,000 gal	9 VAC 5-80-720B	VOC	N/A
TKF12	Fish oil tank 25,000 gal	9 VAC 5-80-720B	VOC	N/A
TKF1001	Fish oil tank 20,600 gal	9 VAC 5-80-720B	VOC	N/A
TKF1001 A	Fish oil tank 300,000 gal	9 VAC 5-80-720B	VOC	N/A
TKF1001 B	Fish oil tank 300,000 gal	9 VAC 5-80-720B	VOC	N/A
TKFOL-1	Fish oil tank 20,000 gal	9 VAC 5-80-720B	VOC	N/A
TKFOL-2	Fish oil tank 20,000 gal	9 VAC 5-80-720B	VOC	N/A
TKFOL-3	Fish oil tank 20,000 gal	9 VAC 5-80-720B	VOC	N/A
TKFOL-5	Fish oil tank 20,000 gal	9 VAC 5-80-720B	VOC	N/A
TKFST-1	Fish oil tank 20,000 gal	9 VAC 5-80-720B	VOC	N/A
TKFST-2	Fish oil tank 20,800 gal	9 VAC 5-80-720B	VOC	N/A
TKPT1	Fish oil tank 220,000 gal	9 VAC 5-80-720B	VOC	N/A

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
TKPT13	Fish oil tank 20,600 gal	9 VAC 5-80-720B	VOC	N/A
TKPT2	Fish oil tank 20,600 gal	9 VAC 5-80-720B	VOC	N/A
TKPT3	Fish oil tank 20,600 gal	9 VAC 5-80-720B	VOC	N/A
TKPT4	Fish oil tank 20,600 gal	9 VAC 5-80-720B	VOC	N/A
TKPT6	Fish oil tank 20,800 gal	9 VAC 5-80-720B	VOC	N/A
TKPT7	Fish oil tank 8,000 gal	9 VAC 5-80-720B	VOC	N/A
TKPT9	Fish oil tank 8,000 gal	9 VAC 5-80-720B	VOC	N/A

[1]The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are available for public review.

PUBLIC PARTICIPATION

A public notice ran in Northumberland Echo on August 28, 2013. The 30-day state public comment period and the 45-day EPA comment period ran concurrently.

Only EPA's informal comments were received by phone during the thirty day public comment period on September 25, 2013. EPA's informal comments were clarified in an e-mail back to them and by phone. The following were the informal comments by EPA:

Statement of Basis:

EPA requested the following statement to be removed due to the clarity of it and it appeared to give a shield in regards to PSD:

"The facility is not subject to 9 VAC 5-80-1700, Prevention of Significant Deterioration (PSD) Areas because the facility had existing emissions exceeding the PSD levels prior to PSD rules implementation. In subsequent permitting actions, Omega Protein agreed to permit restrictions limiting the fuel sulfur content and throughput to BW1, BW2, D1, and D2 so that the net emissions increases were below significance levels for PSD applicability."

Permit:

EPA asked for clarification to condition (no. 43) as it appeared to be missing the last part of the sentence. It was a typo and the highlighted section was added to the condition as noted below:

43. **Process Equipment Requirements - (emission unit ID# MC2) – Monitoring/Recordkeeping** – The high efficiency cyclone referenced in Condition 36 shall be equipped with a differential pressure gauge to measure and continuously record the pressure drop across the unit when the fish meal cooler (MC2) is in operation. The differential pressure gauge shall be installed, maintained, calibrated, and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring records shall note whether the observed pressure drop is within the cyclone manufacturer's recommended range as well as any corrective measures taken as a result. This information shall be maintained at the facility for the most recent five years. Notification of a malfunction shall be given in accordance with the SAPCB Regulations. (9 VAC 5-80-110 and Condition 15 of 5/30/13 Permit)

EPA's remaining informal comment was in regards to the section labeled "Permit Shield and Inapplicable Requirements". It was felt the noted PSD and GHGs should be removed as it appeared to give a shield for both of these items. The items which were removed are as follows:

Citation	Title of Citation	Description of Applicability
40 CFR Parts 51, 52, 70, and 71	Title V Greenhouse Gas Tailoring Rule, Phase 1	Facility is existing source currently not subject to major new source review or PSD for any pollutant.
9 VAC 5 Chapter 80 Part II – Article 8	Prevention of Significant Deterioration Areas	Facility had existing emissions exceeding the PSD applicability levels prior to PSD rules implementation; subsequent modifications limited SO_2 to levels below applicability.

After e-mailing the revised Title V permit and Statement of Basis, EPA responded back in a September 25, 2013 e-mail they had no further comments of the TV renewal. It was confirmed by EPA these comments would be considered informal comments based on they were able to be resolved.